

# Work Order ID 52409

September 23, 2009 1:48:20 PM

Page 1

Item ID: D206-642-541

Reference:

Revision ID: M

Item Name: Replacement Skidtube

Start Date: 9/23/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

Req'd Qty: 1.00

Customer ID:

Customer Name:

Approvals: Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

## Hours

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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IIN-D206-642	Rev M
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100

DC

0.00

0.00

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile & type labels per PPP D206-642-541  
CHG003

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 52409

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Item ID: D206-642-541

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Revision ID: M

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Start Date: 9/23/09

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Customer ID:

Customer Name:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID	Work Center ID	Operation Description	Hours		Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
			Set Up	Run							
110	Skidtubes	Skidtubes	0.00	0.00							
		<b>Memo</b>									
		1- Bend FWD end of tube using bend prog D3274 FWD dwg D3274, cut fwd end of tube with saw table setup D3274.									
		2- remove fwd indexing ridge as per dwg D3274. Prepare for welding									
		3- weld fwd cap as per dwg D3274 and QSI004 AR Aluminum Rod Batch: <u>H109213</u>									
		4- grind fwd cap weld on top surface only									
		5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.									
		6-Drill Aft cap pilot hole using DT8025									
		7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274									
		8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #									
		9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.									

DP 9-9-29

PD 09.09.30

DP 9-9-30

DP 9-9-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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September 23, 2009 1:48:21 PM

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**Customer Name:**

**Approvals:**                      **Process Plan:**

Date:

**Tooling:**

Date:

**QC:**

**Date:**

**SPC (Y/N):**

Date:

## Hours

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

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Item ID: D206-642-541

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Start Date: 9/23/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

Req'd Qty: 1.00

Customer ID:

Customer Name:

Approvals: Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID	Work Center ID	Operation Description	Hours		Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
			Set Up	Run							
150	Skidtubes	Skidtubes	0.00	0.00							
		<b>Memo</b>									
		1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg D3274									
		2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube									
		3-Bond web in place as per Dwg D3274 & QSI 015. A/R: <input type="checkbox"/> Sikaflex-291 <input checked="" type="checkbox"/> M112391 Sikaflex expire date: <input type="checkbox"/> 02/30/2010 Start: <input type="checkbox"/> 9-9-30 Time: <input type="checkbox"/> 3:30pm Finish: <input type="checkbox"/> 9/10/1 Time: <input type="checkbox"/> 8:35pm (Adhere for 12 hours)									
160	QC	QC5- Inspect part completeness to step on W/O	0.00	0.00							
	Quality Control	<b>Memo</b>									

DP 9-9-30

2) 8 or 10/10/1

QC

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries



# Work Order ID 52409

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Start Date: 9/23/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

Req'd Qty: 1.00

Customer ID:

Customer Name:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

## Hours

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Skidtubes	Skidtubes	0.00	0.00							
		<b>Memo</b>									
		1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.									
		2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297" . Deburr									
		3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES									
		4- Countersink crossbolt spacer holes as per Dwg D3274									
		5- prepare for welding									
180	QC	QC5- Inspect part completeness to step on W/O	0.00	0.00							
	Quality Control										
		<b>Memo</b>									

DP 9-10-1

DP 9-10-5

(Pk) 7

h = 2.75"  
L = 4.1"

2) 8/21/09

(XO)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-642-541 PAR #: \_\_\_\_\_ Fault Category: Structures NCR: Yes ☒ No ☐ DQA: / Date: 09-10-20

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>52409</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09.10.01	170	Aft bend height is 2.75"	<u>CP</u> 09.10.01 PC 09/10/20	Acceptable	<u>CP</u> 09.10.15 PC 09/10/20	<u>S</u> 09/10/20	<u>CP</u> 09.10.01 PC 09/10/20	<u>S</u> 09/10/20

NOTE: Date & initial all entries

September 23, 2009 1:48:31 PM

**Reference:**

**Item Name:** Replacement Skidtube

**Start Qty:** 1.00

**Cust Item ID:****Required Date:** 10/08/09

**Req'd Qty: 1.00**

**Customer ID:**

**Customer Name:**

**Approvals:**

**Process Plan:**

**Date:**

**Tooling:**

**Date:**

**QC:**

Date:

**SPC (Y/N):**

Date:

## Hours

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

September 23, 2009 1:48:37 PM

**Reference:**

**Item Name:** Replacement Skidtube

**Start Date:** 9/23/09

**Start Qty:** 1.00

**Cust Item ID:****Required Date:** 10/08/09

**Req'd Qty: 1.00**

**Customer ID:**

**Customer Name:**

**Approvals:**

### Process Plan:

Date:

**Tooling:**

Date:

QC:

Date:

**SPC (Y/N):**

**Date:**

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <u>M112260</u> Memo START TIME: <u>9:00AM</u> OVEN TEMPERATURE: <u>320°C</u> FINISH TIME: <u>9:20AM</u>	0.00	0.00				(X)	0		
240	QC Quality Control	QC3- Inspect Part Finish  Memo	0.00	0.00							
250	HandFinish Hand Finishing	HandFinishing 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/R IN/A/LPS-3 <u>M112391</u>  2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/R IN/Sikaflex-291 <u>M112391</u> Sikaflex expire date: <u>10/20</u>	0.00	0.00							
260	QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo Inspect Nut Plate & Inserts	0.00	0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
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**Work Order ID 52409**

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Item ID: D206-642-541

Reference:

Revision ID: M

Item Name: Replacement Skidtube

Start Date: 9/23/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

Req'd Qty: 1.00

Customer ID:

Customer Name:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:


**Hours**

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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300	QC	QC21- Final Inspection - Work Order Release	0.00	0.00							
-----	----	---	------	------	--	--	--	--	--	--	--

Quality Control

Memo

09/10/15 

W 09.10.15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:47:40 PM

Page 1

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2600-1-190RevD1		Manufactured	No			110	Each	74.0000	1.0000			
												
Extrusion Round 3" 206												

*9-9-29*

D3285-1RevA		Manufactured	No			110	Each	34.0000	12.0000			
												
Cap												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	74	
47575	74	

*1*

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	34	
47635	34	

*1 PD 09.09.30*

D3282-041RevC		Manufactured	No			150	Each	10.0000	1.0000			
												
Float Web (206L/407)												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	10	
48389	10	

*1*

*9-9-30*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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September 23, 2009 1:47:40 PM

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2649RevB1		Manufactured	No			190	Each	711.0000	12.0000			



Cross Bolt Spacer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

LG

83

51529

83

Main Warehouse

ST

628

36013

5

47112

383

48271

240

D3275-1RevA1

Manufactured

No

190

Each

100.0000

12.0000



Crossbolt Spacer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

100

47464

1

48117

43

48270

56

12 26 09/09/07

12 26 09/09/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 3

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
CR3212-4-03		Purchased	No			250	Each	314.0000	2.0000			
												
Cherry Rivet												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    314

111359    96

112314    200

15984    18

D3415-041RevB

Manufactured

No

250

Each

95.0000

1.0000



Nut Plate

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    95

33842    95

CCR264SS3-3

Purchased

No

250

Each

271.0000

2.0000



Cherry Rivet

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    271

111548    56

111827    115

112314    100

X2 MD 09/10/15

X1 MD 09/10/15

X2 MD 09/10/15

September 23, 2009 1:47:40 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 4

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Parent Item: D206-642-541RevM

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Comments:

Start Date: 9/23/09

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Start Qty: 1.00

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
ALS4-1032-130		Purchased	No			250	Each	5,439.000	78.0000			



Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

5439

110511

5439

D3536-15RevA

Manufactured

No

270

Each

43.0000

1.0000



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

43

47711

5

48159

12

51600

26

X78 mo 09/10/15

X1 mo 09/10/15

September 23, 2009 1:47:41 PM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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# Picklist Print

September 23, 2009 1:47:42 PM

Work Order ID: 52409

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Comments:

Start Date: 9/23/09

Required Date: 10/08/09

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3536-23RevA		Manufactured	No			270	Each	32.0000	1.0000			



Gasket

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

FP

12

51609

12

Main Warehouse

ST

20

30754

1

47713

19

D3536-35RevA

Manufactured

No

270

Each

41.0000

1.0000



Gasket

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST

41

48160

15

51628

26

X1 MD 09/10/15

X1 MD 09/10/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:47:43 PM

Page 6

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3536-39RevA		Manufactured	No			270	Each	30.0000	1.0000			



Gasket

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP	12	
51637	12	
Main Warehouse		
ST	18	
44648	1	
47714	6	
48161	11	

XI mo 0911015

D3535-15RevB	Manufactured	No				270	Each	15.0000	1.0000			
--------------	--------------	----	--	--	--	-----	------	---------	--------	--	--	--



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	15	
30750	4	
42233	1	
48155	10	

XI mo 0911015

September 23, 2009 1:47:43 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:47:44 PM

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3535-35RevB		Manufactured	No			270	Each	12.0000	1.0000			
												
Wearshoe												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST

48157

12

12

D3535-39RevB		Manufactured	No			270	Each	15.0000	1.0000			
												
Wearshoe												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST

47525

48158

15

2

13

D3535-23RevB		Manufactured	No			270	Each	13.0000	1.0000			
												
Wearshoe												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST

48156

13

13

XI MD 09/10/15

XI MD 09/11/15

XI MD 09/11/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

September 23, 2009 1:47:44 PM

Page 8

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3537-3RevC		Manufactured	No			270	Each	72.0000	1.0000			



Wearpad

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

72

30758

8

33881

17

35697

47

D3537-1RevC

Manufactured No

270

Each

192.0000

9.0000



Wearpad

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

FP

30

48288

2

50321

28

Main Warehouse

FP17

162

51678

162

X1 mp09/10/15

X9 mp09/10/15

September 23, 2009 1:47:44 PM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:48:03 PM

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN960C10L

Purchased

No

270

Each

6,864.000

80.0000



washer



Warehouse  
Location

Loc Qty

Loc Code

OFFSHORE

FG

100

103585

100

Main Warehouse

ST

6764

112116

1764

112612

5000

AN960C416

Purchased

No

270

Each

706.0000

1.0000



washer



X80 MD 09/10/15

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

706

100993

706

X1 MD 09/10/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:48:03 PM

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3672-1RevB		Manufactured	No			270	Each	1,186.000	2.0000			
												
Phenolic Washer												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 686

39275 19

42329 121


47628 546

Main Warehouse

ST117 500

51674 500

X2 MD 09/10/15

AN3C4A		Purchased	No			270	Each	1,976.000	80.0000			
												
BOLT												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 1976

112082 14

112314 140

112612 146

112720 1176

112724 500

X80 MD 09/10/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:48:09 PM

Work Order ID: 52409

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/23/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN4C5A		Purchased	No			270	Each	603.0000	1.0000			



BOLT

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

603

104936

19

110552

82

112243

500

18918

2

D2646RevC

Manufactured

No

270

Each

56.0000

1.0000



Aft Cap

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

56

20208

0

43801

1

46327

6

48109

49

XI MD 09/10/15

XI MD 09/10/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

September 23, 2009 1:48:09 PM

Work Order ID: 52409



Parent Item: D206-642-541RevM



Parent Item Name: Replacement Skidtube

Start Date: 9/23/09

Required Date: 10/08/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3413-1RevA		Manufactured	No			270	Each	22.0000	1.0000			



Ring



<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	22	
48123	22	

21 MO 09/10/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

WLB  
52409

## GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

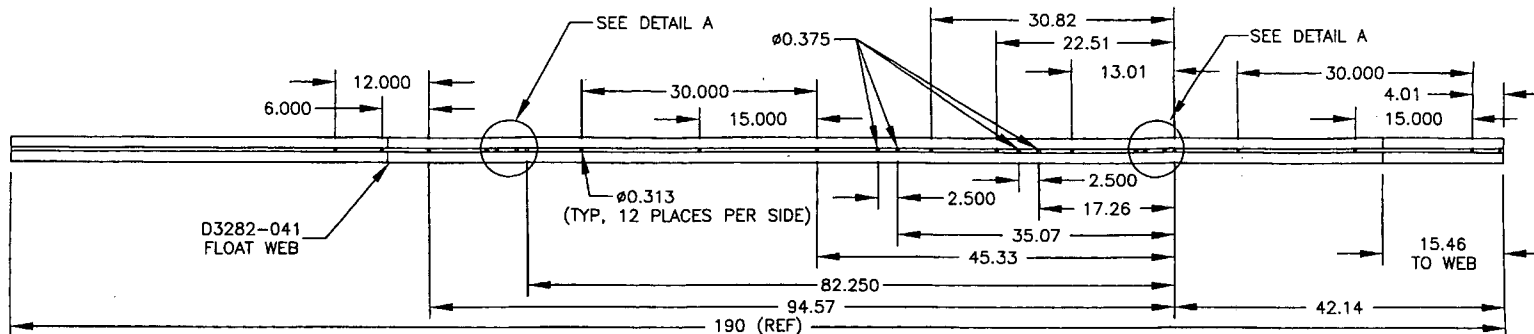
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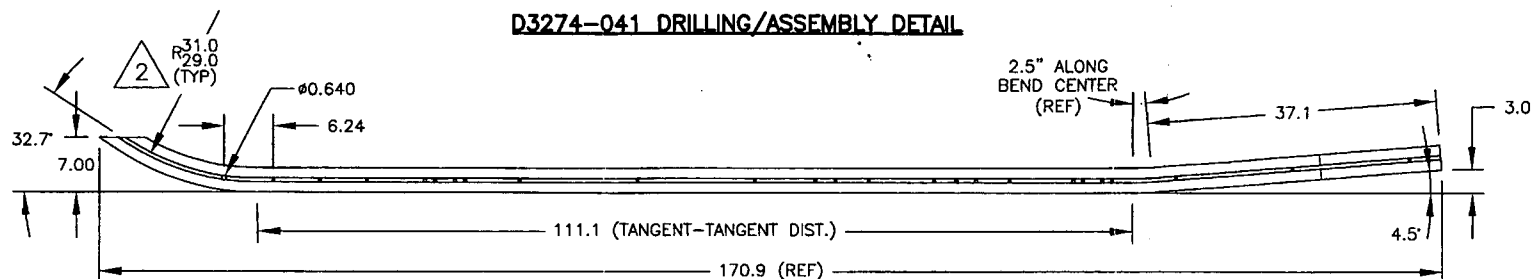
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

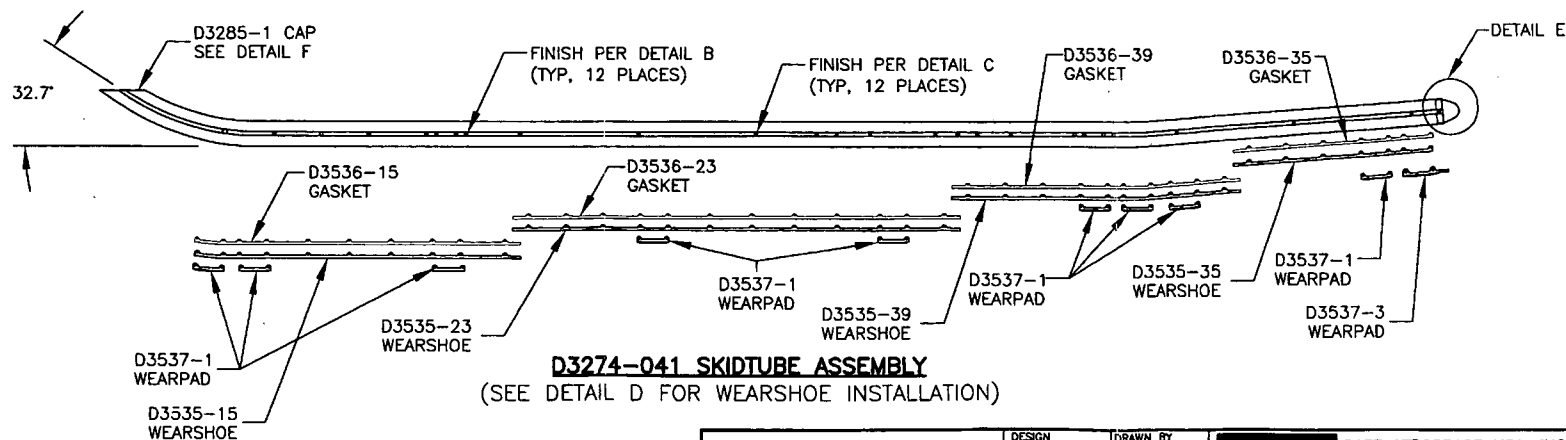
DEO ATTACHED



**D3274-041 DRILLING/ASSEMBLY DETAIL**



**D3274-041 BEND/DRILLING DETAIL**



**D3274-041 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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DESIGN	DRAWN BY	DART	DART AEROSPACE USA, INC.
CP	PH	PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO.	REV. D
#	#	D3274	SHEET 2 OF 4
DATE	TITLE		SCALE
06.12.19	SKIDTUBE ASSEMBLY		1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

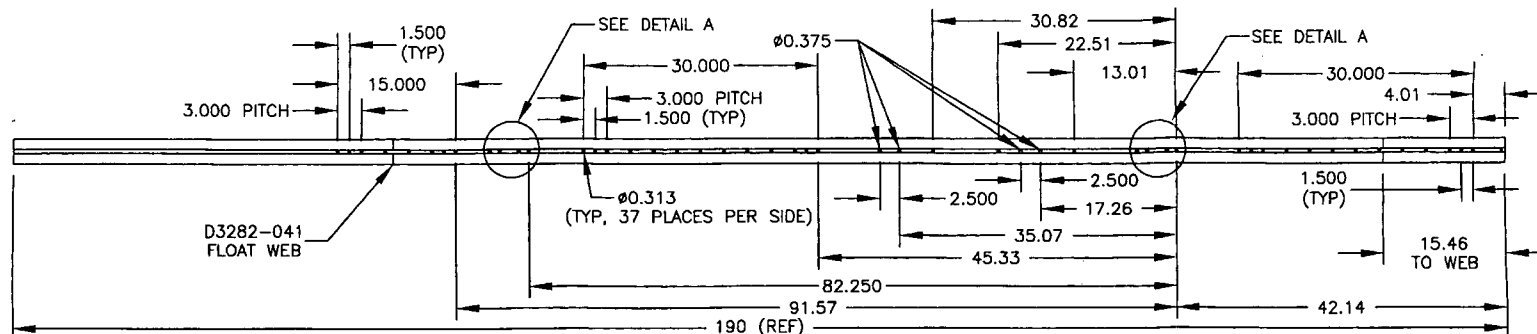
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

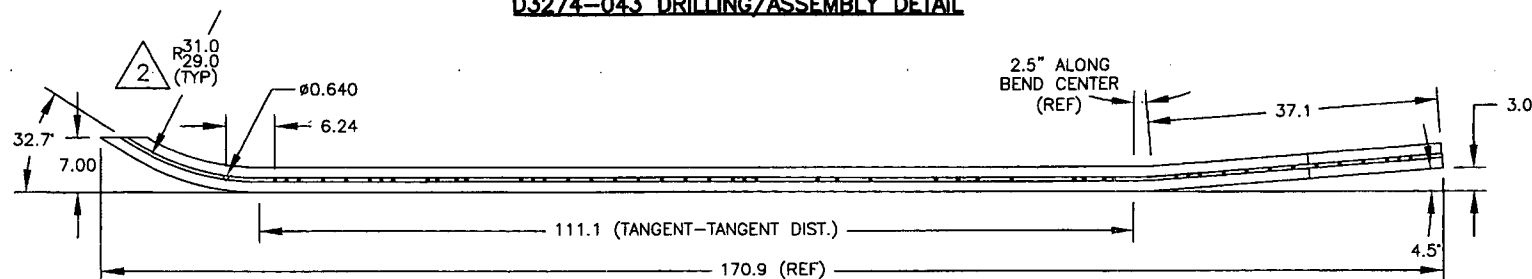
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

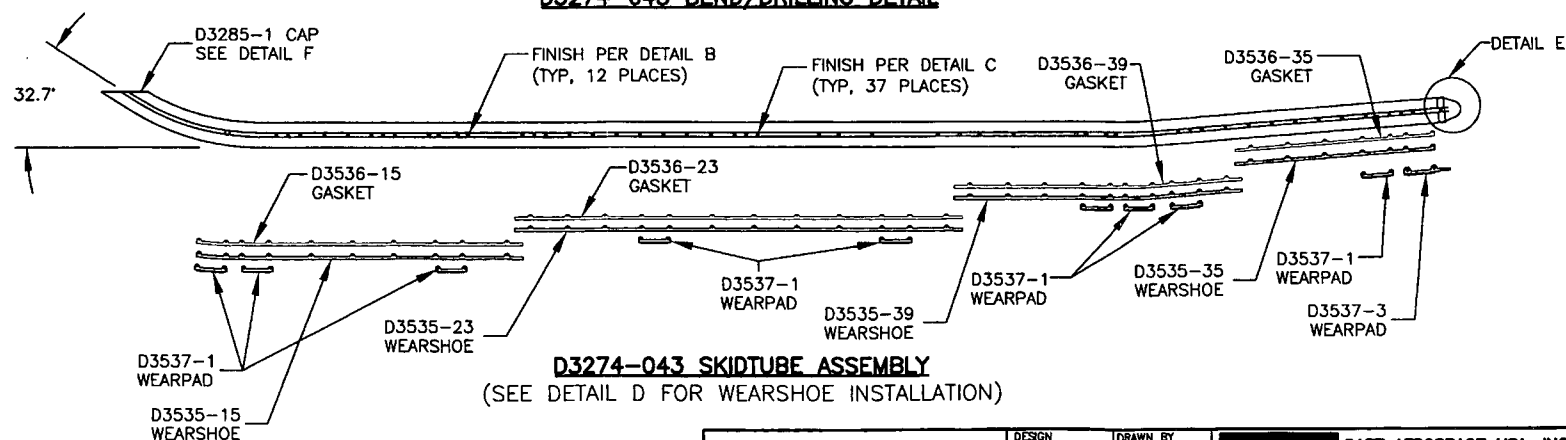
DEO ATTACHED



**D3274-043 DRILLING/ASSEMBLY DETAIL**



**D3274-043 BEND/DRILLING DETAIL**



**D3274-043 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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CHECKED	APPROVED	CP	PH	
DATE	06.12.19	DRAWING NO.	D3274	REV. D
TITLE				SHEET 3 OF 4
SKIDTUBE ASSEMBLY				SCALE 1:15

5/10/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

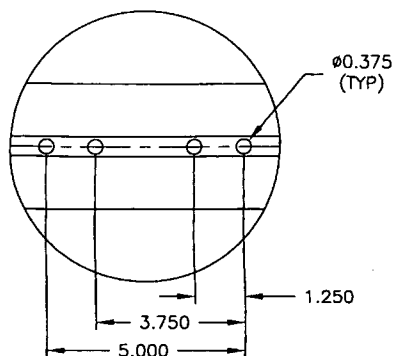
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

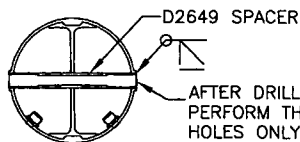
NOTE: Date & initial all entries



# **DETAIL A: DRILL DETAIL**

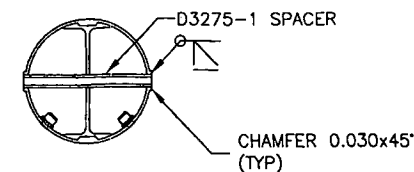


# **DETAIL B** FOR 0.375 HOLES ONLY

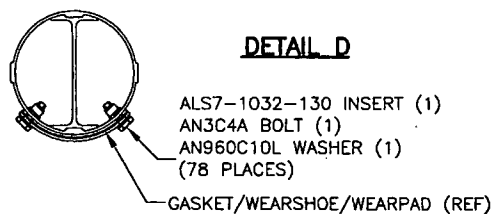


- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375  
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313x0.75 DEEP

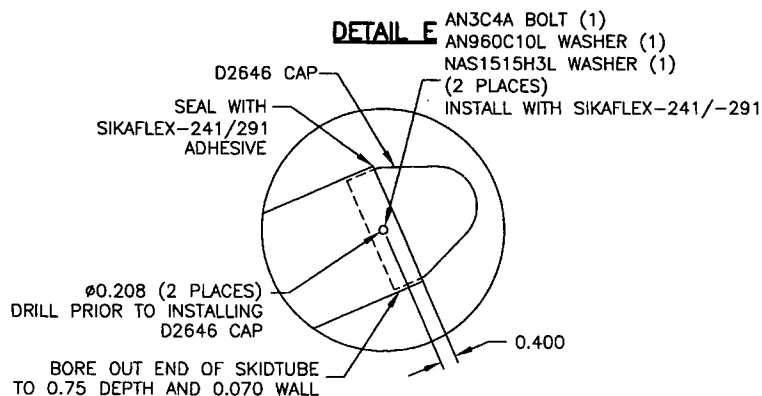
# **DETAIL C** FOR 0.313 HOLES ONLY



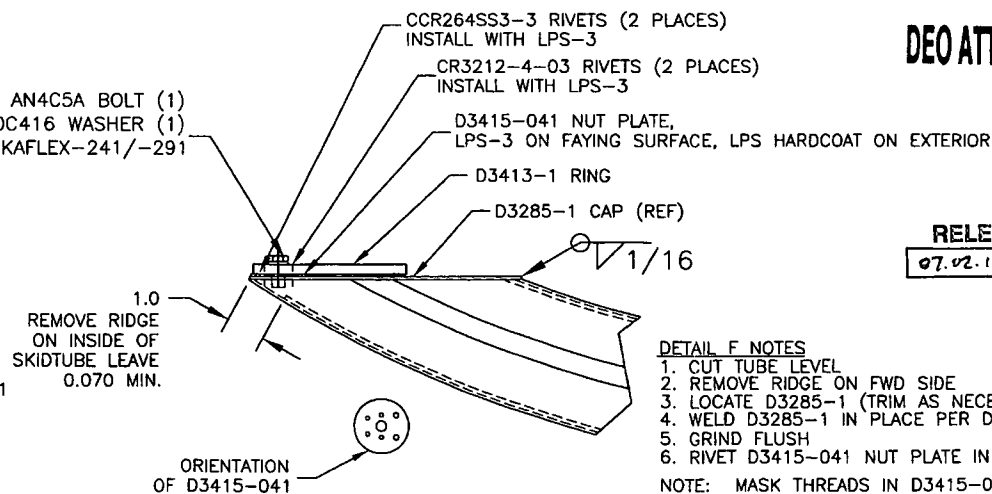
# **DETAIL D**



# **DETAIL E**



# **DETAIL F: END FINISHING DETAIL**



**DEO ATTACHED**

**RELEASED**  
07.02.12

- DETAIL F NOTES**
1. CUT TUBE LEVEL
  2. REMOVE RIDGE ON FWD SIDE
  3. LOCATE D3285-1 (TRIM AS NECESSARY)
  4. WELD D3285-1 IN PLACE PER DART QSI 004
  5. GRIND FLUSH
  6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

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DATE 06.12.19	TITLE SKIDTUBE ASSEMBLY	REV. D SHEET 4 OF 4		SCALE 1:3

*5/20/04*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

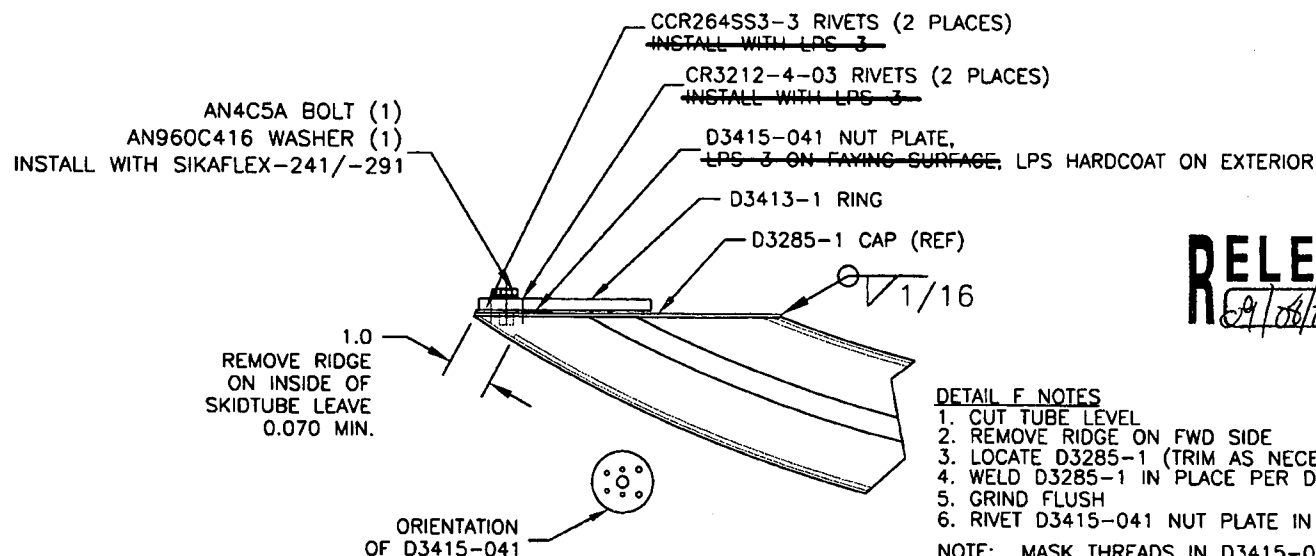
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	<b>DART AEROSPACE USA, INC</b> <b>ENGINEERING ORDER</b>	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS-3' AFTER FINISH AND INSTALLATION OF INSERTS.~~  
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

### DETAIL F: END FINISHING DETAIL



#### DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 211

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 52411  
Part number: 0206-642-541  
Description: 206 skid  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[ ]

Penetration:

pass[☒] fail[ ]

UNACCEPTABLE

Cracks:

pass[☒] fail[ ]

Undercut:

pass[☒] fail[ ]

Pin holes:

pass[☒] fail[ ]

Overlap (cold lap)

pass[☒] fail[ ]

Porosity (surface):

pass[☒] fail[ ]

Coloration:

pass[☒] fail[ ]

Qualifier Pct. Qual

Date of Test Coupon 09-10-09

Welder Barclay Elliott

Date of Test Coupon 09-10-09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld